

EPDUCOC / EPO

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PD - 2003-09-24

PR - JP20020072441 20020315

OPD - 2002-03-15

TI - METHOD FOR MANUFACTURING SKIN-INTEGRATED RESIN MOLDED PRODUCT

AB - <P>PROBLEM TO BE SOLVED: To provide a method for manufacturing a skin-integrated resin molded product by which manufacturing steps and facilities can be simplified and the manufacturing cost can be reduced. <P>SOLUTION: A first molding space of a mold with a cavity part whole cavity space is variable in a mold clamped state, is of almost the same cavity shape as a skin layer and a core layer. In this first molding space, a resin composition corresponding to the first molding space out of a thermoplastic resin composition for the skin layer including a foaming agent which becomes the skin layer and a thermoplastic resin composition for the core layer which becomes the core layer, is first injected. Next, a molded product shaped like the surface layer or the core layer is manufactured in the mold by molding and curing the resin composition to the shape of the first molding space. After that, in such a state that a second molding space of almost the same cavity shape as the other layer is formed between the molded product and the inner wall face of the mold by enlarging the cavity part, the other resin composition is injected into the second molding space and molded and cured to the shape of the second molding space.

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IN - HIRANO HIROYUKI

PA - SEKISUI CHEMICAL CO LTD

IC - B29C45/16; B29C33/12; B29C45/26; B29K101/12; B29K105/04; B29L9/00

TI - Molding method e.g. for instrument panel in motor vehicles, involves injecting thermoplastic resin into primary and secondary cavities to form primary and secondary molded products, respectively

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AB - JP2003266476 NOVELTY - A thermoplastic resin (P1) for molding an outer skin layer (41) is injected into a primary cavity (14). The resin is hardened to obtain a primary molded product (31). The thermoplastic resin (P2) for molding a core layer (42) is injected into a secondary cavity (15) formed between the product (31) and the inner wall surface of a metallic mold (1). The core layer and the outer layer are integrated, forming a secondary product (4).  
- DETAILED DESCRIPTION - The cavities are formed of shape identical to the core and the outer layers. The average thickness of the primary cavity during injection of the resin for molding the outer layer is set at least 8 mm.  
- USE - For manufacturing skin integrated resin molded product such as instrument panel, bumper and hood of motor vehicle.  
- ADVANTAGE - Enables integral molding of the core and outer layers using a single metallic mold, reducing the installation cost and manufacturing cost of the resin molded product. The foam density of the outer layer is regulated, ensuring to achieve desired buffer property. Enables to produce molded product with smooth outer layer surface, without impairing the soft texture of the outer layer.  
- DESCRIPTION OF DRAWING(S) - The figure shows the sectional views explaining the manufacturing method for skin integrated resin molded product.  
- metallic mold 1  
- secondary molded product 4

- primary cavity 14
- secondary cavity 15
- primary molded product 31
- outer layer 41
- core layer 42
- thermoplastic resin for outer and core layers P1,P2
- (Dwg.1/3)

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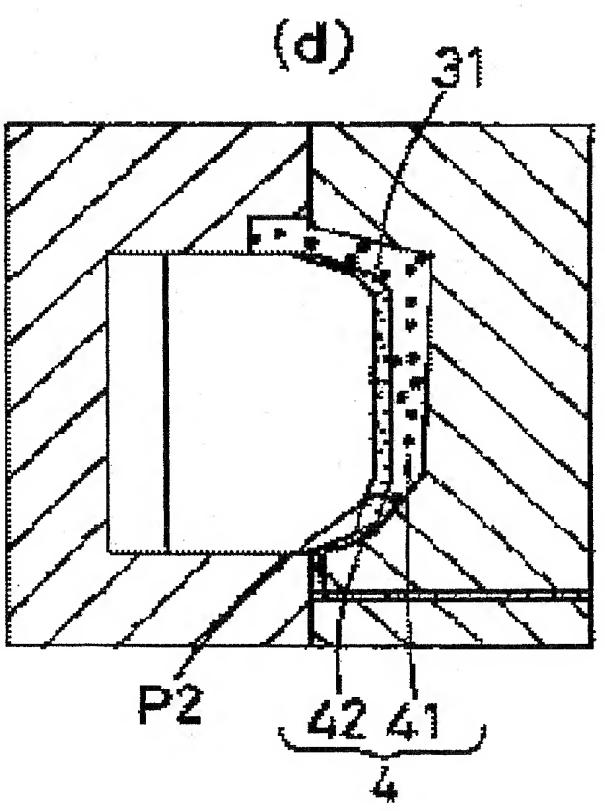
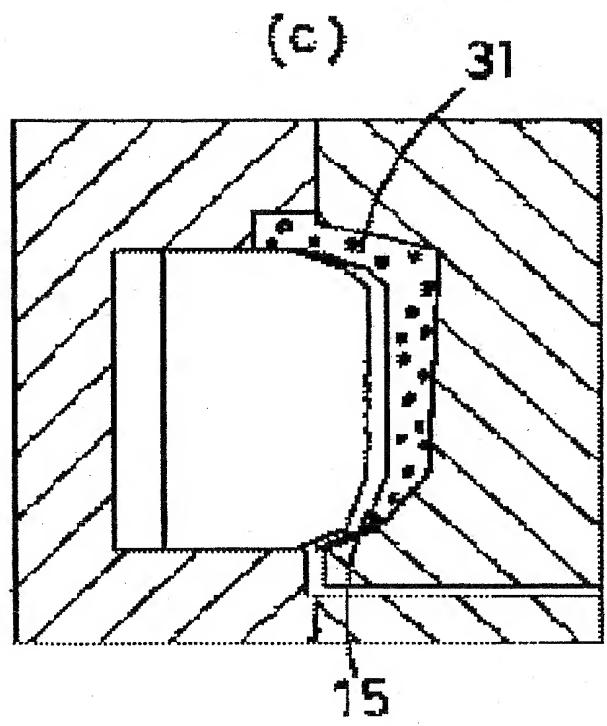
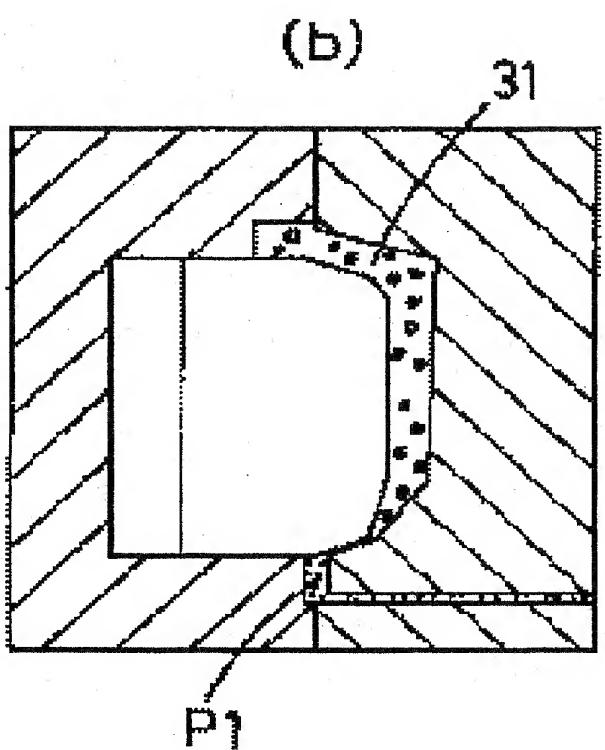
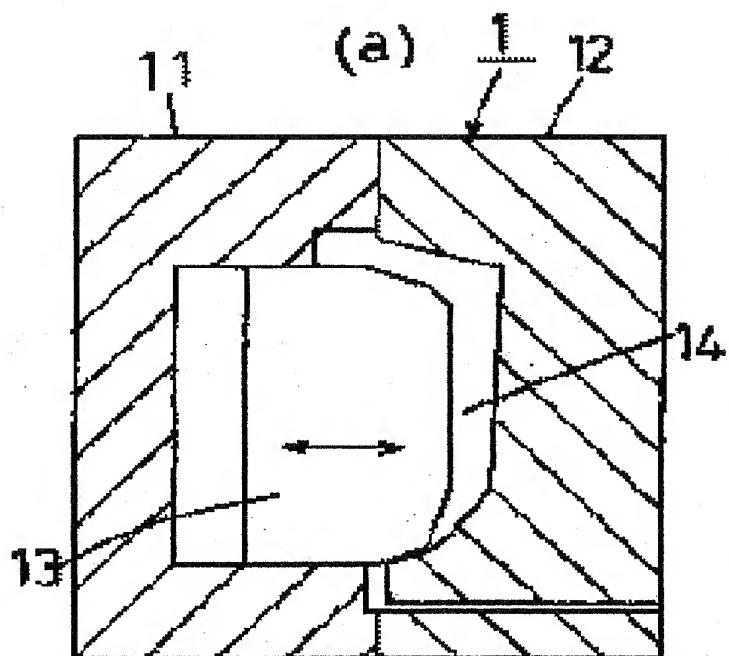
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SI - B29K101/12 ;B29K105/04 ;B29L9/00

I - B29C45/16 ;B29C33/12 ;B29C45/26



あるため緩衝性などを任意にチューニングする事ができる。また、表面の凹凸形状も任意に制御可能である。

【図面の簡単な説明】

【図1】本発明にかかる表皮一体樹脂成形品の製造方法の第1の実施の形態を工程順に説明する説明図である。

【図2】本発明にかかる表皮一体樹脂成形品の製造方法の第2の実施の形態を工程順に説明する説明図である。

【図3】本発明にかかる表皮一体樹脂成形品の製造方法の第1の実施の形態を工程順に説明する説明図である。

【符号の説明】

P 1 表皮層用熱可塑性樹脂組成物

P 2 芯層用熱可塑性樹脂組成物

1 金型

4, 5, 6 表皮一体樹脂成形品

41, 51, 61 表皮層

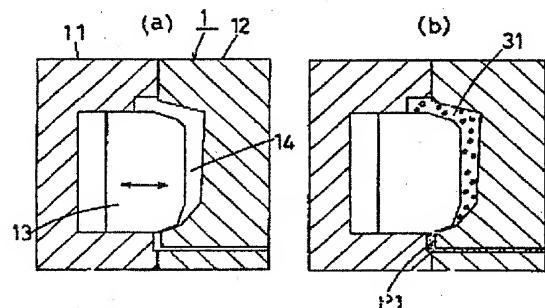
42, 52, 62 芯層

14, 16, 18 第1成形空間

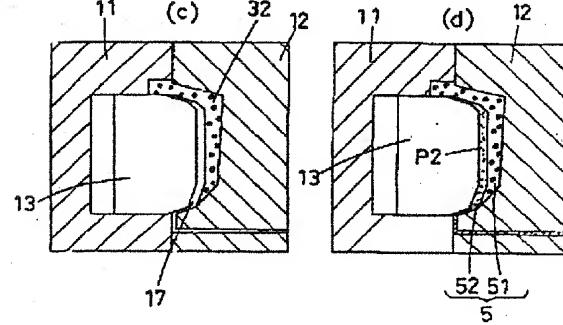
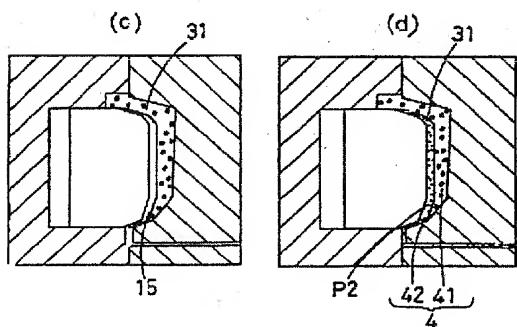
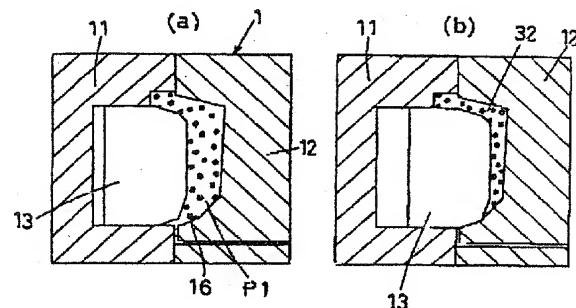
15, 17, 19 第2成形空間

31, 32, 33 1次成形品

【図1】

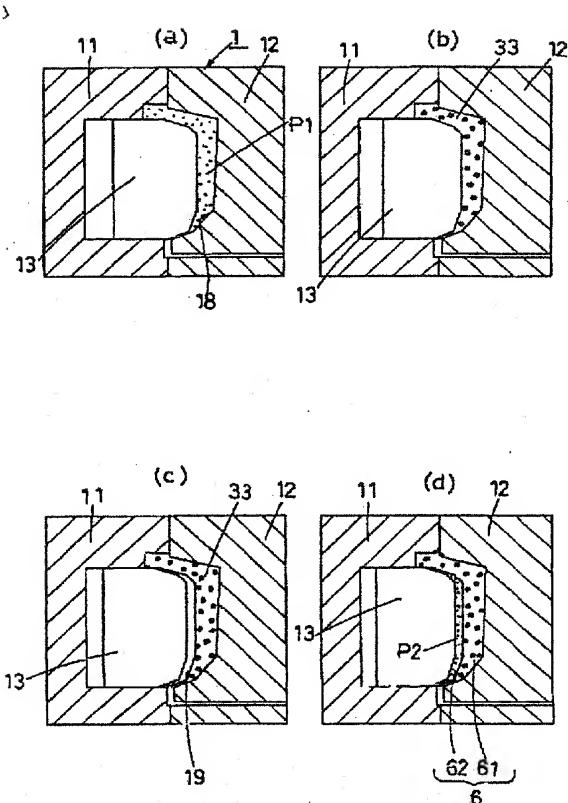


【図2】



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【図3】



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(参考)

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CK52 CQ05  
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JA04 JA07 JB24 JF04 JL02  
JM04 JN12 JN25 JN33 JQ02  
JQ81